

ABSTRACT OF THE DISCLOSURE

In a diffractive optical element and a polarization separation element using this diffractive optical element, incident light can be effectively separated for the respective polarization directions over the entire used wavelength range. The diffractive optical element is arranged such that the diffractive optical element has a grating structure in which at least two blazed type grating portions are overlapped with each other, and in at least one grating portion of the two blazed type grating portions, structures smaller than a used wavelength are arranged in a periodic manner on all of light incident surfaces thereof.

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11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100